



MOTOROLA

“AlphaMate”

Paging Entry Terminal

MODEL N1383A



USER'S GUIDE



6881000B65-0

IMPORTANT

FOLLOWING THE UNPACKING AND INITIAL SETUP OF THE ALPHAMATE, AND PRIOR TO PROGRAMMING ANY DIRECTORY INFORMATION, THE RAM MEMORY SHOULD BE CLEARED. PLEASE PERFORM THE FOLLOWING STEPS WHEN USING THE ALPHAMATE FOR THE FIRST TIME.

REFER TO THE ALPHAMATE PAGE ENTRY TERMINAL USERS GUIDE (68P81000B65) AND FOLLOW THE INSTRUCTIONS IN SECTION II, INSTALLATION, FOR PARAGRAPHS 1 - 5.

ADD THE FOLLOWING STEP TO THE END OF PARAGRAPH 6.a., "Turn-on";

If you responded 'N' (no) to the 'Clear all Memory (N/Y)?' prompt or did not get the prompt, memory must be manually initialized. Press the **Enter** key repeatedly until the display reads 'Select Operation'. Initialize memory by pressing the **Set up** key. In response to each of the following prompts press the **Enter** key; 'Enter Default Paging Tel #', 'Enter Password, If Any', and 'Maximum Page Length (10-2000)?'. In response to 'Change Operational Parameters (N/Y)?', press the **Y** key. In response to 'Reset System (N or CTRL-Y)?', press the **Ctrl** and **Y** keys simultaneously. In response to 'Clear All Memory (N/Y)?', press the **Y** key.

CONTINUE ON WITH PARAGRAPH 6.b. IN SECTION II OF THE ALPHAMATE PAGE ENTRY TERMINAL USERS GUIDE.



MANUAL REVISION

for

"ALPHAMATE"

User's Guide

68P81000B65-0

Radio Paging Terminals

PTDR-122

Issue-1

1. General

This Paging Terminal Documentation Revision (PTDR) specifies pen and ink changes and/or provides replacement pages for the manual. The posting of all pen and ink changes and the insertion of replacement pages is necessary to ensure an error-free, up-to-date manual.

2. Purpose

The purpose of this PTDR is to add information and technical changes that have occurred since the last printing of the manual.

3. Explanation

This PTDR explains a software anomaly that affects the display, and provides a name and address for service information.

4. Action to be Taken

a. Discard and Replace Manual Pages

DISCARD	INSERT
Discard no pages.	Insert and retain this PTDR in front of the manual.

1. Software Operation

When using the AlphaMate with a printer attached, an anomaly exists in the software which affects the display. When paging is initiated using the directory feature, and after the page has been accepted by the paging terminal, the AlphaMate should display the word PAGE, the directory data, and the entered data.

The anomaly is that the letter P in the word PAGE is replaced by the first letter of the name called from the directory, followed by the normal display.

As the example, if JOE was entered following the ENTER NAME prompt, during the display sequence after the page had been accepted by the paging terminal, the display would (very briefly) show JAGE, followed by the normal display sequence.

This anomaly affects only the display, and has no affect on the paging operation. All data is transmitted just as entered.

2. Service

For your service requirements, please contact Guy Watson, Motorola Product Services, phone (305) 738-2213 located at Motorola Inc., 1500 N.W. 22nd Ave., Boynton Beach, FL 33435.

SPECIFICATIONS

Model # :	N1383A
Keyboard:	Standard typewriter with upper case lock, separate function keys, and type-ahead buffer.
Display:	40-character LCD with cursor, decendons, and contrast control.
Character Set:	Full ASCII
Memory:	7500 bytes (characters) are available for directory and text functions.
Message Length:	Up to 2000 characters per page message.
Modem:	Built in 300 Baud Bell 103 compatible - internally changeable to CCITT V.21
Autodialer:	Built in DTMF or variable speed pulse dialer with automatic redial in automatic page mode.
Connectors:	Phone line - USOC RJ11C Modular Connector Telephone Set - USOC RJ11C Modular Connector Acoustic Coupler - 5 pin DIN Serial Printer - 5 pin DIN Provision for RS232 Direct Connection to Central Terminal - DB25S, 25 pin Female Connector Input Power - Jack for 9V DC from provided 110V AC external power supply.
Call Monitoring:	Internal speaker with volume control.
Power:	110V AC, 60Hz. Provision for four "AA" Primary Cells to retain memory contents under extended power failures.
Dimensions:	4" x 8" x 12" (HxDxW)
Weight:	3 Lbs.
Operating Temp:	0 to 50 degrees C

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I. INTRODUCTION

1. Product Description

AlphaMate is an integrated alphanumeric paging entry terminal and automatic telephone dialer that offers convenience, features, and capabilities far beyond anything that has previously been available in its price range.

As an alphanumeric paging entry terminal, it features automatic dialing and autologon via standard page entry terminal protocol to a central paging terminal, and automatic transfer of paging messages.

As an advanced telephone dialer, it features on-hook dialing, last number re-dial, automatic dialing, and a large directory memory. The directory memory is battery backed so it keeps its contents even if power is removed.

It also offers services based on its built-in **Modem**, **RS232** port and text-editing functions. The built-in **Modem** allows connection with data-service centers as well as paging terminals. AlphaMate can act as a 'dumb' terminal when connected to a local computer through the **RS232** port. Editing functions allow you to compose and edit messages for paging or to be sent through **Comm** and **RS232** operations.

AlphaMate is easy to use. It instructs the user through visual prompts that lead from one step to the next.

Figure I.1.1 shows the AlphaMate unit. Figure I.1.2 shows the rear panel of the AlphaMate.

2. Keyboard Operation

a. The Layout

The keyboard is laid out in a standard typewriter keyboard arrangement. The following special purpose keys are provided in addition to the standard keyboard:

(1) **Function Keys.** The top row of keys are special-function keys labeled **Page**, **Recall**, **Page Dir**, **Set Up**, **Comm**, **Files**, **Brk**, **RS232**, **Tel Dir**, **Quit**, **On** and **Off**. Pressing one of these keys will terminate the current operation (if any) and invoke one of the following functions directly:

- o **Page** - This is used to put the AlphaMate into the **Automatic Page** mode of operation.



FIGURE I.1.1. AlphaMate Paging Entry

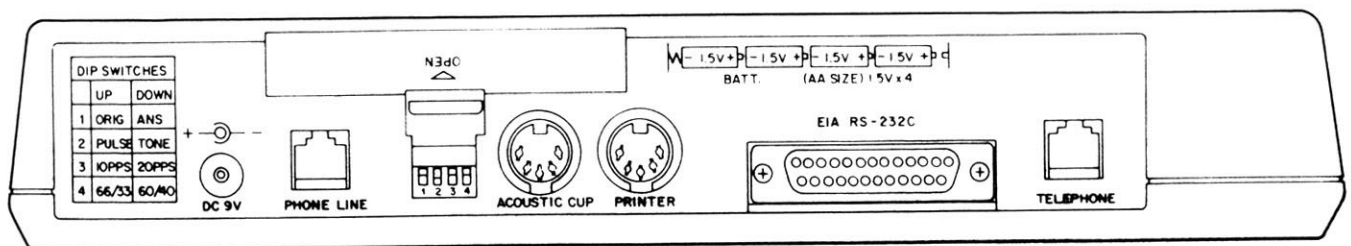


FIGURE I.1.2. Rear Panel of the AlphaMate

- o **Recall** - This provides a means to review or resend all or some of the previous pages sent during the last **Automatic Page** mode.
- o **Page Dir** - This allows you to review, delete, modify, and add an entry to the **Page Directory**.
- o **Set Up** - This is used to set a number of parameters of the unit. In particular, in order to make the **Communication** mode (Comm) function properly, you should make sure that the various communication parameters (for example: length of message to the pager, Baud rate, parity bit and number of stop bits) are correctly set up with respect to the remote computer, otherwise the information being transmitted will be garbled. (see Section II paragraph 6.b. for full details).
- o **Comm** - Allows you to make a voice/data call either manually or from the **Telephone Directory**. Used also to call paging systems which are "conversational" instead of automatic.
- o **Files** - Allows adding, editing, deleting and transmission of files.
- o **Brk** - Breaks the communication link between the unit and some remote/local terminals. This operates only in the **Comm** and **RS232** modes.
- o **RS232** - Allows the unit to be used as a local 'dumb' terminal. It also allows the option of local connection to a paging terminal.
- o **Tel Dir** - Allows you to review, delete, modify and add an entry to the **Telephone Directory**.
- o **Quit** - Terminates the current operation and brings the unit back to the 'rest state'. In this state, it displays 'Select Operation' as well as the amount of memory available to the user for the various functions.
- o **On** - Turns ON AlphaMate.
- o **Off** - Turns OFF AlphaMate.

(2) **Control keys.** Located on the keyboard are special control keys labeled **Caps Lock**, **Shift**, **Back Space**, **Tab**, **Esc**, **Enter**, **Ctrl**, **↑**, **↓**, **←**, and **→**.

- o **Caps Lock** - This key locks the letter keys into upper case while leaving the other keys unaffected. This key is toggle action - it is possible to change to lower case mode by pressing this key once and then back to upper case mode by pressing this key again. AlphaMate is in upper case mode or 'Caps Locked' when it is turned on.
- o **Shift** - Capital letters and all symbols marked as superscripts on the keys can be typed while pressing the appropriate key together with one of the **Shift** keys.
- o **Back Space** - The **Back Space** key is used to delete a character to the left of the cursor. If you want to delete a whole sentence to the left of the cursor, just press and hold the **Back Space** key until the sentence is deleted.
- o **Tab** - Generates eight blank characters at a time; as if you pressed the space bar eight times.
- o **Esc** - When the unit is on-line, an ASCII Escape is sent.
- o **Enter** - Upon pressing this key, the entry shown on the display will be accepted. When in the **RS232**, **Files** (edit) and **Comm** modes, this key enters a computer carriage return character.
- o **Ctrl** - The symbol " ^ " stands for the **Ctrl** (Control) key, which is located on the right-hand side of the keyboard. The **Ctrl** key is always used in conjunction with another key. Like a **Shift** key, the **Ctrl** key must be held down while the other key is pressed. Unlike the **Shift** key, the code sent by the control key does not register on the display. Control sequences (Ctrl) are mainly used by the unit's editor when working with the **Files** function or when using **Comm** operation to a remote computer system. (Appendix F lists the assignment of the control Character Codes).
- o  ,  ,  ,  - These are the arrow keys on the lower part of the keyboard. These are cursor positioning keys and are frequently used in selecting a directory entry. This also provides an opportunity to correct typing mistakes by moving the cursor to the wrong character and re-typing the correct character. The window through which the user reads the text moves in the direction of the  ,  arrows; the cursor moves in the direction of the  ,  arrows.

b. Performing Keystroke Entries

Most of the keystroke entries you will be performing will be single entries. You simply press and release the required key. Some inputs are invoked by operating two keys together. These are shift key inputs. The ASCII control keys, for example, are invoked by operating the **Ctrl** key in conjunction with an ordinary key (refer to Section VIII). The correct procedure is to press and hold the **Ctrl** first, and then press the ordinary key before releasing the **Ctrl** key.

c. Automatic Key Repeating

Normally, the correct way to perform a keystroke input is to press and release the required key once. Pressing and holding down a key for longer than one second will cause that key input to be automatically repeated. This feature is very useful if you have to type in a string of a given character. AlphaMate also allows you to type faster than the information can be displayed.

d. The 'Beep' Tone

The AlphaMate emits a short beep tone when you perform a keystroke input. It will also emit a beep tone of longer duration when you have made an incorrect entry.

3. Other Features

a. Display

The 40-character, alphanumeric Liquid-Crystal Display (LCD) provides a visual display of all information entered from the keyboard, along with message prompts to assist in any keyboard operations.

b. Left Side Panel

The left side panel contains the volume control for the AlphaMate. This control adjusts the sound from the unit's built-in speaker. To increase the volume level, rotate the thumbwheel toward the rear of the unit.

c. Right Side Panel

The right side panel contains the contrast control for the AlphaMate's LCD display. This control adjusts the contrast level of the display to match your viewing angle. To increase the contrast level, rotate the thumbwheel toward the rear of the unit.

d. Bottom Panel

The bottom panel contains the built-in speaker. The area under the AlphaMate unit must be kept clear to properly hear the speaker.

e. Rear Panel

The following are located at the rear of the AlphaMate (see Figure I.1.2):

- o **DC 9V jack.** The external AC adaptor is connected to the AlphaMate through this jack.
- o **PHONE LINE modular RJ11C jack.** This jack connects the AlphaMate to telephone circuitry, allowing the AlphaMate to use the telephone line. An ordinary two-wire phone line is all that will be required.
- o **MODE SWITCHES.** At the back of the unit, under a removable protective cover, there are four small switches for setting the **Signaling** mode and the **Modem** mode. On the left side of the back panel is a chart showing the correct settings for these switches. If changes in the settings are required, refer to Section II, paragraph 3.
- o **EIA RS232C jack.** Allows the user to connect the AlphaMate directly to a paging terminal or to a computer.
- o **TELEPHONE modular RJ11C jack.** This jack allows for connection of the user's telephone to the AlphaMate.

4. Printer Socket

AlphaMate has a built-in printer interface, which allows communication with a low cost serial printer. You may also connect a printer with **RS232** serial interface. Since the cable connection arrangement of the printer port may be different from the printer you want to connect, you will need a cable fitted with the proper type of 5-pin DIN connector. The connector arrangement is shown below.

<u>Pin No.</u>	<u>Function</u>
1	No Connection
2	Data Output
3	Ground
4	No Connection
5	Printer ready

Be sure to set the printer's Baud rate to 1200 and the data format to 8 bits, no (mark) parity and 1 stop bit. The printer should be capable of accepting data from the AlphaMate when the '**Printer Ready**' control signal is 'high'.

The printer not only prints on demand in the **Files**, **Tel Dir** and **Page Dir** modes, but it also prints automatically during the **Page**, **Recall**, **Comm** and **RS232** modes. This function is necessary since the responses received from a terminal are too fast and you may not be able to understand them. A printer output is provided for later reference. (See Appendix D for illustration of connection and available printer cable model numbers).

5. Acoustic Coupler Socket

An acoustic coupler allows you to use the AlphaMate with phone lines where a direct connection to the telephone network is not possible or not permitted. The coupler attaches to the handset of a telephone via an elastic band, and is adjustable to fit a wide variety of handset styles. It also has a cable to connect to the 5-pin DIN socket on the rear panel of the AlphaMate.

The conversion from a direct connect mode to an acoustic coupled mode is straightforward. The 5-pin DIN plug on the acoustic coupler cable is wired so that whenever the acoustic coupler is plugged into the socket, AlphaMate is automatically switched to the acoustically coupled mode. All of the display messages will be referencing 'Acoustic Coupler' operational procedures.

The acoustic coupler has mouthpiece and earpiece graphics to identify the correct placement of the handset to the coupler. When the **Page**, **Recall** and **Comm** operational modes are initiated, AlphaMate will prompt the user that the acoustic coupler mode is active and list the phone number to be manually dialed. The display then prompts the user to '**Press Enter After Tone**'. The **Enter** key may be pressed any time after dialing, and AlphaMate will complete the page. If you hear a high-pitched modem tone, the terminal is waiting for a response from AlphaMate and the **Enter** key should be pressed to allow completion of the page. (See Appendix E for illustration of the Acoustic coupler connection and wiring requirements of the 5-pin DIN connector).

6. Modem Operation

a. Introduction

A **Modem** (**MOD**ulator-**DE**Modulator) is a device to convert a computer signal into a form that can be transmitted through the normal telephone network. AlphaMate is equipped with built-in Modem

compatible with BELL 103 and CCITT V.21 standards. The BELL 103 standard is widely used in North America, and CCITT V.21 standard is widely used in Europe and some Asian countries. Either of the Modem standards can be internally selected. Ask your service representative for assistance if a different standard is required.

b. Communication Parameters

In order to communicate with remote computers and other devices, various communication parameters such as Baud rate, parity bit, and number of stop bits must be correctly set up, otherwise the information being transferred may be garbled.

The Baud rate for AlphaMate is fixed at 300 Baud in compliance to the BELL 103 and CCITT V.21 standards. Other parameters may vary depending on the mode in which AlphaMate is operating. Refer to Section II, paragraph 6.b for more details.

c. Answer and Originate Modes of Operation

The proper selection for AlphaMate is the **Originate** mode set by switch 1 of the DIP switch located on the back of AlphaMate. (Refer to Section II, paragraph 3).

7. Self-diagnostics

Operational parameters, a telephone directory and a pager directory are stored in AlphaMate's internal memory. Each time AlphaMate is turned on, a self-diagnostic routine is executed to determine if the memory content is intact. If the memory fails the test, a beep tone will sound, followed by an error message. The Self-diagnostic error message will state:

- o **SYSTEM ERROR** - The memory content is defective. Answer the prompt, 'Clear All Memory (N/Y)? (N); by pressing 'Y' (for yes) to clear the Memory content.

8. Other Displayed Messages

Insufficient Directory Space - This appears when all of the allocated Memory has been filled by entries in the **Page Directory** or **Telephone Directory**. Approximately 3800 characters will be residing in memory to reach this statement. It is possible to fill up the **Page Directory** and **Telephone Directory** with 75 normal directory entries. It is recommended to leave some space available in the directories to allow AlphaMate to perform its requested operation and not inform the user additional entries will not be accepted.

Memory Full - As the (xxxx Available) display approaches values under the maximum message length, the AlphaMate may respond with '**Memory Full**' to inform the user the requested operation cannot be performed. If this occurs, the deletion or editing of the **R-files** and **T-files** will provide added Memory capability.

II. INSTALLATION

1. Preliminary Equipment Checks

Check the mechanical operation of the keyboard pushbuttons, volume control, and contrast control. The pushbuttons should have positive action, the volume control and the contrast control should not bind.

2. General Installation Requirements

To ensure optimum performance and reliability, adequate facilities must be available at the AlphaMate location. Carefully review the electrical and physical requirements outlined in the following paragraphs before selecting a site.

a. Physical Requirements

AlphaMate is designed to operate in an indoor office environment which is between 0 and 50 degrees C (32 and 122 degrees F).

b. Electrical Requirements

AlphaMate is powered by an external AC adaptor with a cable that plugs into the unit's 9V DC supply jack. It is recommended that you choose a nearby AC outlet where you can hide the adaptor and its cable. This prevents unnecessary power interruption by removing the cable from the unit's power jack accidentally while you are working with the unit.

3. Switch Settings

On the back panel of the unit, under a removable protective cover, there are four small switches for setting the **Signaling** mode and the **Modem** mode. On the left side of the back panel is a chart showing the correct settings for these switches. **NOTE: These switches are pre-set at the factory as follows:**

- Switch 1 'UP' for originate
- Switch 2 'DOWN' for Touch Code dialing
- Switch 3 and switch 4 are not used with Touch Code dialing but are preset with Switch 3 'UP' and Switch 4 'DOWN'.

Changes to these settings may be made by referring to the following paragraphs describing the parameters. Replace the protective cover after settings are properly selected.

a. Signaling Mode Setting

The **Signaling** mode determines how your AlphaMate sends dial signals to telephone company equipment. The mode selected may be either **PULSE** or **DTMF**. The mode selected depends on the type of service provided by your telephone company.

'SW-2' to 'SW-4' control the selection of telephone dialing method. The following settings may be selected.

<u>SELECTION</u>	<u>UP</u>	<u>DOWN</u>
'SW-2' dialing method:	Pulse	Tone
'SW-3' pulse rates:	10 pps	20 pps
'SW-4' pulse mark/space:	66/33	60/40

For operation in the United States, normal setting is 'SW-2' in the '**DOWN**' position for Tone dialing. Settings for 'SW-3' and 'SW-4' are not used. If you are on a pulse (rotary) system use the following settings:

- 'SW-2' in '**UP**' position for pulse dialing.
- 'SW-3' in '**UP**' position for 10 pps (pulse per second)
- 'SW-4' in '**DOWN**' position for 60/40 (60% mark to 40% space)

For information on the telephone exchange, please contact your local telephone operating company.

b. Modem Mode Setting

'SW-1' controls the selection of one of the two operation modes of the built-in Modem as follows:

<u>SELECTION:</u>	<u>UP</u>	<u>DOWN</u>
'SW-1' Modem modes:	Originate	Answer

Generally, you should select the '**Originate**' mode when initiating a data call (e.g. to a Paging center).

4. Installing Batteries and using the AC Adaptor

Install the four (AA) alkaline batteries into the battery compartment, taking care to observe the indicated polarity. **DO NOT USE RECHARGEABLE NICKEL CADMIUM BATTERIES.** Plug the AC Adaptor (supplied) into a nearby 110V AC outlet and insert the DC supply plug into the unit's external 9V DC supply jack.

5. Battery Life and Replacement

The installed batteries serve the following two purposes:

- o If AC power failure occurs, the unit is momentarily powered by the batteries until it turns itself off.
- o They prevent loss of the memory data when the AlphaMate is in the **OFF** state. If power failure is not frequent, the installed batteries should last for one year. After this period the batteries may become exhausted and should be replaced. AlphaMate monitors the battery status for you. The installed batteries require replacement whenever the '**Low Battery**' message appears on the display.

To replace the batteries, **MAKE SURE THAT AC POWER IS APPLIED TO AlphaMate AND THE UNIT IS TURNED OFF.** If the batteries are removed without AC power applied, the memory content will be lost.

NOTE: When removing the battery compartment cover, care should be taken so that the protective switch cover is not discarded. The protective switch cover should be in place prior to replacing the battery compartment cover.

6. Initial Start-up

If you have modular telephone jacks, unplug your telephone cord from the wall socket and plug the cord into the AlphaMate at the connector labelled **TELEPHONE** so that you may use your phone and receive incoming calls. Using the phone cord provided with AlphaMate, you may connect it to your wall socket from the port labelled **PHONE LINE**.

If your telephone system does not have modular connectors, you may want to install an **RJ11C** wall jack or adaptors purchased from a phone store. If local regulations prevent you from direct connection to the phone lines, you will need the optional acoustic coupler. Simply plug the acoustic coupler in and you are ready for operation, using your telephone.

a. Turn-on

Activate the AlphaMate using the **ON** key. For optimum viewing, you may adjust the contrast of the display with the contrast control on the right side of the unit. AlphaMate will undergo a self-test and respond with the '**Select Operation**' prompt, as well as the number of available characters in memory. If the power has been interrupted and the unit was without battery backup, AlphaMate may report a system error and ask if you wish to clear memory. If this happens, please respond '**Y**' (Yes).

b. Set-up Operational Parameters

AlphaMate has been factory programmed with a set of default operation parameters. These parameters can be redefined at any time by pressing the **Set Up** function key. The procedure for changing these parameters is straightforward. After the particular parameters have been changed and **Enter** has been pressed, the **Quit** key will return the unit back to the 'Select Operation' prompt.

Select the **Set-Up** mode with the **Set Up** key. The set-up sequence will be as follows (To select the default option, press the **Enter** key, if the default option is not desired, enter the chosen option and press the **Enter** key):

(1) 'Enter Default Paging Tel #'

This stores the telephone number of the paging center which you most often call. Press the **Enter** key to skip this prompt or enter the telephone number and press **Enter**. The telephone number is limited to 23 digits in length. The characters entered must either be numeric or a combination of numeric and the five special characters (@, +, S, /, *), other characters are not accepted. These special characters have the following meanings:

@ - This character can be placed at any position in the string. This gives a exchange-line access-pause of 2 seconds. This pause is needed when the unit is connected to an extension outlet from a PBX (Private Branch Exchange) system.

+ - This character can be placed at any position in the string. When this character is encountered, dialing will not continue until the **Enter** key is pressed. This allows additional pause time.

S - If you only access one paging center, you can put the character 'S' in front of the telephone number. By doing so, you will not be asked to input a telephone number when you initiate a page.

/ - This indicates that the pager number is the same as telephone number.

* - This indicates a direct connection is made and no telephone number is to be dialed.

(2) 'Enter Password, If Any'

Some paging centers require the caller to enter a password. This prevents unauthorized access to the paging terminal. The password is a character string limited to six alphanumeric characters in length

including one of two special characters (\$ or &). These two special characters serve the following purpose:

- o '\$' - This character can be placed anywhere in the string. This character is the symbol representing the serial number which is assigned to the unit. Some paging centers require the caller to enter this serial number as part of the password. The serial number is a string of eight alphanumeric characters.
- o '&' - In some cases, you may be required to enter your password each time you want to send a page. You can make this password a compulsory one by adding a '&' character in front of the password. AlphaMate will send the password before a page automatically.

Press the **Enter** key to skip this prompt or enter the password and press **Enter**.

(3) 'Maximum Page Length (10-2000)? 0080'.

Although AlphaMate can compose and store messages up to 2000 characters long, most terminals and pagers can only accept pages of much shorter length. This step permits you to set and adjust the maximum length of message that your terminal and/or pagers will accept to prevent the loss of portions of messages.

(4) 'Change Operational Parameters (N/Y)? N'.

Normally you may press **Enter** at this point of the **Set Up** procedure. This would allow the AlphaMate to operate with its established default parameters. **Note:** The AlphaMate has been preset to match paging terminals using a standardized automatic protocol (protocol is a set of conventions governing the format and control of inputs and outputs between two communicating processes, including handshaking and line discipline). The protocol for all automatic paging operations (that is all operations using the **Page** or **Recall** function keys) cannot be changed.

The protocol for all operations controlled by the **Comm** or **RS232** keys has been preset to match most paging terminals and most dial-in on-line computer terminals. If you cannot communicate with another system which has a matching Modem (Bell 103 equivalent or optionally CCITT V.21), you may wish to change some of the communication parameters. You should note that you may also have to change them back if you communicate with other computer systems which use the default (preset or recommended) settings. To enter this phase of the set up, please press 'Y'.

If you have already set up the AlphaMate, the following steps may be skipped by answering 'N' to this prompt. This will return the AlphaMate to the 'Select Operation' mode. You may then skip items (5) through (13).

If you have any questions about what the following values should be, consult the representative of the paging system or computer you wish to communicate with.

(5) 'Reset System (N or Ctrl-Y)? N'

Press Ctrl 'Y' to invoke memory test. Should the memory fail the test, the message RAM Error will appear on the display and then the unit will turn itself off. Otherwise the unit will prompt with 'Clear all Memory (N/Y)? N.' Press 'Y' (yes) if you want to flush the memory contents, which will destroy all of the existing memory in the directories and files. Otherwise press 'N' or press the Enter key and the unit will continue with the following Set-Up procedures.

(6) 'Enter (1=Half Duplex, 2=Full Duplex)? 2'

Full/half duplex refers to whether or not AlphaMate echoes keystrokes to its display while it is in communication with a paging terminal or computer. Almost all paging systems and computers will use the default value of '2'. In half duplex AlphaMate echoes local keystrokes. Press the Enter key to accept this operating mode or enter a '1' followed by Enter to change to half duplex.

(7) 'Data Word Format (1-8)? 3'

This setting is important in data communication as both parties must use the same word format in order to correctly recognize the information transmitted. The standard for alphanumeric page entry ports is option 3 (the default). One of the other seven data word formats may be chosen, according to the following table:

SETTING DATA WORD FORMAT

1	7 bits + 2 Stop bits + Even parity
2	7 bits + 2 Stop bits + Odd parity
3	7 bits + 1 Stop bit + Even parity
4	7 bits + 1 Stop bit + Odd parity
5	8 bits + 2 Stop bits
6	8 bits + 1 Stop bit
7	8 bits + 1 Stop bit + Even parity
8	8 bits + 1 Stop bit + Odd parity

Press Enter to proceed to the next step.

(8) 'Enter is (1=CR only, 2=CR + LF)? 1'

This parameter determines whether operating the **Enter** key will be sending a 'CR' (carriage return) code and 'CR' + 'LF' (carriage return and line feed) codes in the communication mode. Again, the standard for paging is the default of '1' (CR only). Press **Enter** to proceed to the next step.

(9) 'File Width (1=32, 2=40, 3=64, 4=80)? 2'

The file width control function operates during the printing mode when message is being printed to a printer. The printed message will be adjusted (with word wrap) to the selected width. Press **Enter** to proceed to the next step.

(10) 'Xon, Xoff (N/Y)? N'

This is a way of coordinating the AlphaMate's **Comm** mode with a remote computer. Normally the correct answer is No. XON and XOFF are names for two ASCII characters that, by convention, mean 'start sending data' and 'stop sending data'. When the remote computer cannot handle any more characters, it sends the XOFF character to the AlphaMate and the AlphaMate waits. When the remote computer is ready to start receiving again, it sends an XON and the AlphaMate resumes sending data. Press **Enter** to proceed to the next step.

(11) 'RS232 Baud Rate (1=300, 2=1200)? 1'

Baud Rate is the parameter defining the data transmission rate during communication via the **RS232** serial port. A rate of 300 baud or 1200 baud may be selected. Press **Enter**.

(12) 'Page Functions To (1=MODEM, 2=RS232)? 1'

AlphaMate can be connected directly to a paging terminal through the **RS232** interface or remotely through the built-in Modem. If you are sending pages to the terminal by telephone, the default selection of '1' is correct. If you have a direct **RS232** cable connection to the terminal, '2' is the correct selection. Press **Enter**.

(13) 'Define (1=#, 2=~~£~~)? 1 and Define (1=/, 2=~~¥~~)? 1'

There are extra symbols ('~~£~~' and '~~¥~~') which appear on the 3 and 6 keytops, respectively. These symbols are used in regions outside of the United States. Press the **Enter** key and the AlphaMate will return to the 'Select Operation' prompt.

The AlphaMate is now ready for operation. You are now ready to send pages. You will not need to perform the set-up step again unless they need to be changed or the battery is depleted while the power is removed.

III. USING THE PAGE KEY

1. Basic Function

The primary function of the AlphaMate is to transfer alphanumeric pages prepared with the unit through remote or local central paging terminals. You can address a pager by its pager number or the name of the user. You can transfer the same message to a group of pagers serviced by a single central paging terminal. More than one page can be entered and they can be sent one by one as they are entered to different central paging terminals. The process of logging on to a central paging terminal and transferring of pages is fully automatic. AlphaMate keeps all unsent pages entries and prompts you (**Unsent Pages Exist**) when the **'Select Operation'** prompt is displayed.

2. Entering Pages

More than one page entry can be entered. Page entries are arranged in a queue.

a. Operate the **Page** key, AlphaMate displays **'Page'** and then prompts **'Enter Name or Pager #.'**

b. If the first character of the entry is numeric, AlphaMate assumes this entry is a pager number. A pager number is up to 10 digits in length.

If the first character of the entry is an alpha, AlphaMate assumes this entry is a name existing in the **Page Directory**. AlphaMate accepts a name of up to seven characters. Up to six multiple name entries, separated by commas, are allowed in this field to allow the same message to be sent to all six entries. Multiple number entries are not allowed.

All of the alpha entries in this field must match entries in the **Page Directory** (see Section V for how to use the Page Directory). If no match is found for any entry, AlphaMate rejects the whole group of entries and beeps and prompts: **'NNN NOT FOUND'**, where NNN is one of the entries not found.

c. If the alpha entries are correct, the AlphaMate prompts **'Enter Message'** (see d). If a pager number was entered AlphaMate prompts **'Enter Phone #'**. A number sequence may appear following this prompt. This is either the default telephone number from **Set Up** or the telephone number entered on the last page. Press **Enter** to keep this number sequence or type in another phone number or a name associated with a paging system phone number that has been entered in the **Telephone Directory** and press **Enter**.

d. AlphaMate prompts '**Enter Message-**'. Enter a message using the keyboard to compose the message with **Arrow** keys and **Backspace** as editing functions. The message must end with an **Enter** key. The message length is limited to the number of characters defined in **Set Up**. AlphaMate emits a long 'beep' on attempts to input more than the pre-defined number of characters. An empty field is accepted for tone alert only messages.

e. AlphaMate prompts '**Send, Review, Next, or Quit?_S**'. Press '**N**' (for next) to enter the next page entry. More than one page may be entered; the entered pages are arranged in a queue. To enter additional pages, repeat steps (b) through (d).

3. Sending Pages

When the prompt '**Send, Review, Next, or Quit?_S**' appears on the display, press **Enter** or the '**S**' (for send) key to start sending page entries stored in the queue. AlphaMate starts its automatic paging sequence by going off-hook, dialing the appropriate phone number and logging on to the correct central paging system. You can hear the progress of the call through the built-in speaker and see all message sequences being sent by the paging system. The Volume Control does not change the audio level of the calling sequence telephone responses.

In some cases, the AlphaMate may not be able to make a successful call to a central paging system, for example, the line may be busy. The automatic redial feature enables the AlphaMate to redial five times. The AlphaMate does not recognize a busy signal and will prompt '**On Hook...**' after approximately 34 seconds, prior to redialing. If all five attempts are unsuccessful, the display will read '**Retry timeout!**' and the '**Select Operation**' prompt will be displayed with the '**Unsent Pages Exist**' message. Each page successfully sent is removed from the page queue. You will hear a long 'beep' tone if the page has been successfully sent. You will hear three long 'beeps' for an unsent page. Each page not successfully sent remains in the queue unless manually deleted. When you review the page queue, you will find those unsuccessful pages are labelled **UNSENT**.

If an invalid **Subscriber Number** is sent to the paging system, AlphaMate's attempt to send the page will be unsuccessful. Depending on the established replies, the paging system may send to the AlphaMate an informational message as to the reason for the unsuccessful paging event. AlphaMate will display the paging system's reply. The page will be retained in memory and noted as unsent. Similarly, if an invalid character is in the message, the indication of this invalid character can be noted by the paging system and this reply will be

shown on the display. The page will be noted as unsent in the **Page Memory**. Prior to sending any new pages all unsent pages are displayed with the **'Next, Edit, Delete or Out?_N'** prompt to be acted upon.

4. Reviewing Page Entries

When the prompt **'Send, Review, Next, or Quit?_S'** appears on the display, press the **'R'** (for review) key. AlphaMate prompts each individual field of an unsent page entry starting from the first page in its queue. Editing of the displayed field is allowed. Normally AlphaMate displays an entered field every 2 seconds until the end of the page. You can speed up this process by using the (down arrow) key to display the remaining fields at will.

5. Editing a Page Entry

When the prompt **'Next, Edit, Delete or Quit?_N'** appears on the display, press the **'E'** (for edit) key. This allows you to edit the page entries starting from the one previously displayed to the end of the page queue.

Type in the correct content as if you are now entering a new entry or press **Enter** to skip this field. After editing the message field, the entire entry will be displayed as in the review mode. When the prompt **'Next, Edit, Delete or Quit?_N'** appears, press **'N'** (for next) to review next entry and then press **'E'** (for edit) to edit this entry.

6. Deleting a Page Entry

When the prompt **'Next, Edit, Delete or Quit?_N'** appears on the display, press the **'D'** (for delete) key. The page entry previously displayed will be deleted if you press **'Y'** (for yes) as the answer to the prompt **'Delete this entry (N/Y)?_N'**. If the deleted entry is the last entry in the page queue, AlphaMate prompts **'Review Empty'**.

7. Defeating the Redial Function

If AlphaMate is used in locations where automatic redial is prohibited, this feature can be defeated internally. Ask your service representative to make the adjustment for you.

IV. USING RECALL

AlphaMate retains the last Automatic Paging Event(s) in memory as a convenience to the user.

The purpose of the **Recall** key is to provide a means to review or resend all or some of the pages sent with the last 'send' command.

Operating the **Recall** key causes the AlphaMate to display the following messages.

RECALL -- N PAGES -- 'Send, Review, Next or Quit?_S', where 'N' is the number of pages which were entered with the last 'send' command.

Press 'S' (for send) or Enter to resend all 'N' pages in the page queue attempted in the last 'send' command. Striking 'R' (for review) will bring AlphaMate to the same review function as under the **Page** mode, allowing editing of the previous entries before resending. The 'D' (for delete) function allows selective deletion, as under the **Page** mode, of the previously sent pages before retransmission. The 'N' (for next) steps AlphaMate to the next entry during a review or allows new entries to be appended to the old entries before a resend. Refer to Section III for editing and adding a page entry.

V. USING THE PAGE DIR (pager directory)

1. Introduction

To provide rapid entry of automatic paging events the AlphaMate unit is able to respond to Names, Initials or other Reference Files beginning with an alpha character that have been placed in memory. The user does not have to remember and enter all of the access numbers for the paging terminal and the pager.

Directory entries can be added to, edited and deleted from the pager directory. Each entry consists of three fields (**Name**, **Pager Number** and **Phone Number**). The **Name** field will hold up to seven alphanumeric characters. The first character **MUST** be an alpha. The **Pager Number** field will hold up to 10 digits and the **Phone Number** field will hold up to 23 digits. If a **'P'** (for Password) is entered, six additional alphanumeric characters can be added to the phone number field.

AlphaMate will not accept additional directory entries if the allocated memory space is full; it prompts **'Insufficient Directory Space'**. If this occurs you should press the **'Q'** or the **Quit** key and the AlphaMate will execute a 'quit' and return to the 'rest state' displaying the **'Select Operation'** prompt. You may choose to delete unneeded earlier entries to allow the addition of new directory entries.

2. Adding Directory Entries

Directory entries may be added by following the steps listed below:

- a. Turn on the AlphaMate by pressing the **On** key if it had been turned Off.

The AlphaMate will display the **'Select Operation'** prompt.

- b. Press the **Page Dir** key and the unit will display **'PAGE DIRECTORY'** momentarily and then display the **'Change, View, Print or Quit? C'** prompt.

- c. Press the **'C'** (for change) key or **Enter** key, and the unit will display **'Add, Edit, Delete or Quit? A'**.

- d. Press the **'A'** (for add) key or **Enter** key, and the unit will prompt **'Enter Name.'**

e. Enter a name of up to seven characters beginning with an alpha, and terminate with the **Enter** key. If a name beginning with a numeric is entered, the unit prompts '**First character must be alpha-**'. If the name is already in the directory, the unit displays '**Name exists-**' and then re-prompts with '**Enter Name**'. AlphaMate will recognize initials or names made with upper or lower case entries as the same entry.

f. After an acceptable name is entered, AlphaMate then prompts '**Is Phone # Same as Pager # (N/Y)? N**'. This prompt is skipped if in the **Set Up** mode the '**Enter Default Paging Tel #**' entry is a / symbol.

g. After the phone # and pager # relationship is established, the unit prompts '**Enter Pager #-**'. Type in the pager number followed by **Enter**. The pager number is limited to 10 digits in length. The characters entered must be numeric.

h. Next AlphaMate prompts '**Enter Phone #-**'. The phone number shown in this field may be the default telephone number stored in the **Set Up** or the number you entered last time. This prompt is skipped if the answer to the previous prompt was 'Y' (for yes) or if in the **Set Up** mode the '**Enter Default Paging Tel #**' entry is preceded by an 'S' in which case, the **Set Up Default Paging Tel #** is transferred to the directory. Otherwise, type in the telephone number for the paging system or a name from the **Telephone Directory**, followed by **Enter**. The name must be contained in the **Telephone Directory** and the corresponding telephone number must be entered with the option 'P' (paging).

The telephone number is limited to 23 digits in length. The characters entered must be numeric or a combination with the five special characters (@, +, P, \$, &) other characters are not accepted. Refer to Section VI, paragraph 2.e for the meanings of these special characters.

After entering an acceptable telephone number and pressing the **Enter** key, the unit will display '**Change, View, Print, or Quit? C**'.

i. Repeat steps c through h for each additional entry.

3. Viewing a Directory Entry

The view mode is the most 'forgiving' way to look at the pager directory, because it does not require the user to remember the entire or exact name.

- a. When the prompt **'Change, View, Print or Quit? C'** appears on the display, press the **'V'** (for view) key and AlphaMate prompts **'Enter Name'**. (if the name is unknown, see e.)
- b. Enter a name of up to seven characters beginning with an alpha. If a name beginning with a numeric is entered, AlphaMate prompts **'First character must be alpha-'**. The name is checked for a match against the directory. If there is no match, AlphaMate prompts **'Name not found-'** and then **'Enter Name-'**.
- c. If a match is found, AlphaMate displays the corresponding pager and telephone number.
- d. AlphaMate then prompts **'Next, Again or Quit? N'**. Press **'A'** to view the entry again, **'N'** or **Enter** to view the next entry in the directory, or press **'Q'** to quit.
- e. If an empty Name field is entered, the entire directory is presented to the display one by one, the Name field is presented first then Pager Number and Phone Number fields follow. Press **Enter** to bring up the number fields and the message **'Next, Again, or Quit? N'**. Press **Enter** to display next directory and so on until the last entry. By pressing the **↓** (down arrow) key, the information displayed can be scrolled faster for each directory entry. If only the first letter(s) of the name is entered, the directory will begin with all names having that as the first letter(s). When completed AlphaMate will return to the message **'Next, Again, or Quit? N'**.

4. Deleting an Entry

- a. When the prompt **'Change, View, Print or Quit? C'** appears on the display, press the **'C'** (for change) key or **Enter** key and AlphaMate prompts **'Add, Edit, Delete or Quit? A'**.
- b. Press **'D'** (for delete) and the AlphaMate prompts **'Enter Name-'**.
- c. Enter a name of up to seven characters beginning with an alpha. If a name beginning with a numeric is entered, AlphaMate prompts **'First character must be alpha-'**. The name is checked for a match against the directory. If there is no match, AlphaMate prompts **'Name not found-'** and then **'Enter Name-'**.
- d. If a match is found, AlphaMate prompts **'Delete this entry (N/Y)? N'**. A **'Y'** (for yes) key deletes the entry and a **'N'** (for no) key or **Enter** key returns you to the **'Change, View, Print or Quit? C'** prompt.

5. Editing an Entry

a. When the prompt **'Change, View, Print or Quit? C'** appears on the display, press the **'C'** (for change) key or **Enter** key and AlphaMate prompts **'Add, Edit, Delete or Quit? A'**.

b. Press **'E'** (for edit) and the AlphaMate prompts **'Enter Name-.'**

c. Enter a name of up to seven characters beginning with an alpha. If a name beginning with a numeric is entered, AlphaMate prompts **'First character must be alpha-.'** The name is checked for a match against the directory. If there is no match, AlphaMate prompts **'Name not found-'** and then **'Enter Name-.'**

d. If a match is found, AlphaMate displays, **'Is Phone # same as Pager # (N/Y)? N'**.

If an **'N'** is entered or **Enter**, AlphaMate displays the pager number. Edit the number or press **Enter** to keep the same pager number. AlphaMate will then display the phone number. Edit the number or press **Enter** to keep the same phone number.

If a **'Y'** is entered AlphaMate displays the phone number. Edit the number or press **Enter** to keep the same phone number. AlphaMate will then display the **'Change, View, Print or Quit? C'** prompt.

6. Listing Directory Entries

If you have a printer attached, it is important to periodically make a list of your directory entries. If the AlphaMate has been without power for a short time, and the batteries are not installed or depleted, the memory contents may be lost or distorted. An updated directory listing will enable you to quickly re-enter the directory information. (See Appendix A for sample printouts). As an alternative, space is provided on the back of AlphaMate's Quick-Reference card to list your directory entries.

a. When the **Page Dir** key is pressed the unit prompts **'PAGE DIRECTORY'** and then **'Change, View, Print or Quit? C'**.

b. Press the **'P'** (for print) key, the unit will print the directory to the attached printer while displaying **'Press Quit to stop'**. After printing all pager directory entries, the unit will return to the state displaying the message **'Change, View, Print or Quit? C'**.

7. Paging using the Page Directory Entries

When the page function is requested AlphaMate will reply '**Enter Name or Pager #-**'. By entering current **Page Directory** names or initials, the need for remembering all of the pertinent numbers is minimized. Section III covers the full details of the **Page** event.

VI. USING THE TEL DIR (telephone directory)

1. Introduction

The AlphaMate telephone directory saves time when making calls or pages. It holds a complete list of your contacts and lets you scan through them in a few seconds. In the **Comm** mode, you can type in the name corresponding to a given number and AlphaMate dials the number automatically. In **Page Dir** mode, you do not have to enter the phone number for a given page if the name already exists in the **Telephone Directory** as a designated paging system **Phone Number**.

Directory entries can be added to, edited and deleted from the **Telephone Directory**. Each entry consists of two fields (**NAME** and **NUMBER** and sometimes a third field called **Logon Message**). The **NAME** field will hold up to seven alphanumeric characters. The first character **MUST** be an alpha. The **NUMBER** field will hold up to 23 digits. If a '**P**' (for password) is entered, six additional alphanumeric characters can be added to the **Phone Number** field.

Before adding a new entry to the directory, you must determine the call-type of the called party. If your called party is a computer center or if you want to pass your message to another AlphaMate user, then the call-type is '**Data**' or '**Autologon**'. If the computer center is equipped with an auto-answer Modem and requires the caller to identify himself in order to establish legitimacy of access then the call-type must be '**Autologon**', otherwise it is '**Data**'. If the called party is a paging center then the call-type is '**Page**' or '**Telephone**'.

AlphaMate will not accept additional directory input if the allocated memory space is full; it prompts '**Insufficient Directory Space**'. If this occurs you should press the '**Q**' key or the **Quit** key and the AlphaMate will execute a 'quit' and return to the 'rest state' displaying the '**Select Operation**' prompt. You may choose to delete unneeded earlier entries to allow the addition of new directory entries.

2. Adding Directory Entries

Directory entries may be made by following the steps listed below:

- a. Press the **On** key if AlphaMate had been turned Off.

The AlphaMate will prompt with '**Select Operation**'.

b. Press the **Tel Dir** key.

The AlphaMate will prompt with '**TELEPHONE DIRECTORY**' and then '**Change, View, Print or Quit? C**'.

c. Press the '**C**' (for change) key or **Enter** key, the unit displays '**Add, Edit, Delete or Quit? A**'.

d. Press the '**A**' (for add) or **Enter** key, the unit prompts '**Enter Name**'. Enter a name of up to seven characters beginning with an alpha and followed by **Enter**. If a name beginning with a numeric is entered, the unit prompts '**First character must be alpha**'. If the name is already in the directory, the unit displays '**Name exists-**' and then prompts '**Enter Name-**'. AlphaMate will recognize initials or names made with upper or lower case entries as the same entries.

e. After an acceptable name is entered, the unit prompts '**Enter Phone #**'. Type in the phone number followed by **Enter**. The telephone number is limited to 23 digits in length. The characters entered must be numeric or a combination with the five special characters (**@**, **+**, **P**, **\$**, **&**), other characters are not accepted. These special characters have the following meanings:

- o **@** - This character can be placed at any position of the string. This gives an exchange-line-access-pause of 2 seconds. This pause is needed when the unit is connected to an extension outlet from a PBX (Private Branch Exchange) system.
- o **+** - This character can be placed at any position of the string. When this character is encountered, dialing will not continue until you strike the **Enter** key. This allows additional pause time.
- o **P** - This character must be at the end of a telephone number and is valid **ONLY** when the call-type is '**Paging**'. The character string following the letter '**P**' is the password. The password is a character string limited to six alphanumeric characters in length including the special character '**\$**'. Besides the '**\$**' character there is another special character '**&**', both characters serve different purposes:
- o **\$** - This character can be placed anywhere in the string. This character is the symbol representing the ID number which is assigned to the unit. Some paging centers require the caller to enter this ID number as part of the password. The ID number is a string of eight alphanumeric characters.

- o **&** - Sometimes you may be requested to enter your password each time you want to send a page. You can make this password a compulsory one by adding a '**&**' character in front of the password. AlphaMate will send the password automatically before sending a page.

f. After a telephone number is entered, the unit prompts '**Telephone, Paging, Data or Autologon? T**'. Select the correct call-type by typing the first letter of an option or press **Enter** to select the telephone option. The options have the following meanings:

- o **Telephone** - You must have another telephone connected to AlphaMate. The unit functions as an ordinary memory dialer but it keeps your hands free.
- o **Paging** - This directory entry will allow the paging directory to use the phone number in the telephone directory memory for alternate paging terminal access when you may be at another location and do not want to reformat the current page directory information.
- o **Data** - The called party is a computer. The communication parameters are defined in the **Set Up**.
- o **Autologon** - As soon as the link between the AlphaMate and a computer center is established, some computer centers will proceed to interrogate the caller in order to establish identity and legitimacy of access. This is known as the 'Log-on' procedure. You may transmit appropriate replies via the keyboard, however AlphaMate provides you a more convenient way to make a call to these computer centers. You can program AlphaMate to execute the Log-on procedure automatically. This is achieved by storing the relevant Log-on data in the directory along with the phone number. Refer to paragraph 3 below for entering the Log-on message.

The AlphaMate unit displays '**Change, View, Print or Quit? A**'.

g. Repeat steps c through f for each additional entry.

3. Entering the Log-on Message into the Directory

In addition to the **Name** and **Telephone Number** fields, the directory also stores programmable fields, arranged into receive and transmit messages. The first field, **R-field**, is reserved for storing a receive message, the second field, **T-field**, a transmit message, a third field, a receive message and so on. Once the phone

link between AlphaMate and a computer center is established, the unit will wait to receive a message from the computer center and then compare the input with the first R-field for the exact sequence of characters. If the input message is longer than the R-field content, the unit will still establish the match as long as the input data stream contains the exact sequence of characters. The first T-field will be transmitted as a reply to the received message and then the AlphaMate waits to match the input against the contents of the second receive message and so on until all R-fields have been compared with

messages received and the T-fields have been transmitted. An R-field begins with the letter 'R' whereas a T-field begins with the letter 'T', each letter is followed by a string of text terminated by an **Enter** key. Control characters are allowed. The symbol '^' stands for the **Ctrl** key and must be entered before a control character. Sentences not beginning with either 'R' or 'T' are regarded as comments. Carriage return can be represented by '[M' so it is more visible in the Autologon Message; it is also obtained by '^M'.

When AlphaMate sends the Log-on message to a computer center, the information is transmitted at a high rate of speed. Some computers are unable to receive information at this speed. To avoid losing any information, AlphaMate can be commanded to wait before transmitting to a slower computer. The character '@' serves this purpose, it commands the AlphaMate to add a 2.0 second delay before a transmit message. Multiple '@'s can be entered, each '@' must be separated by an **Enter** key or you can simply enter '@n' where 'n' is the number of 2.0 second intervals. A sample Autologon sequence is shown in Appendix B with descriptive details.

Hints for Autologon Message Entries

- Normally the writer of an **Autologon** sequence will pick a short series (5 or so characters) of unique characters extending to the end of a prompt requiring an answer.
- Sometimes a pause is needed before the next transmission of the response. The '@' character will provide a 2 second pause.
- The characters in the 'R' sequence must exactly match the expected characters, that is, they must be the same upper or lower case letter(s), have the same number of spaces and other punctuation if there is more than one word involved.
- Avoid sequences with control characters since they do not show up on the display or optional printer printouts.

- The general procedure for setting up an Autologon is to first log-on manually using the **Comm** mode of the AlphaMate. Review the conversational transactions by either accessing the R-file and using **Edit** and the **Cursor Control** keys (**↑** , **↓**) or printing the log-on session on an optional printer. In this way the proper selection for the received messages and transmitted replies is verified.
- The writer of an **Autologon** sequence must be very careful not to rewrite or alter the desired message when in the **Edit** mode. An actuation of the **Enter** key will add unwanted lines to the **Autologon** sequence. The message should be revised only through the use of the cursor control keys (**↑** , **↓**). If an **Enter** or other characters are accidentally entered, the back space key can be used to correct these unwanted entries.
- If an Autologon has been written and does not work:
 - o Check for exact matches of 'R' sequences.
 - o Rewrite any 'R' sequences which are looking for long sequences of characters to look for short sequences. This improves the probability of not receiving a bad character in a long sequence.
 - o Check for extraneous or missing characters in the 'R' and 'T' sequences.
 - o Check all of the 'T' sequences that are normally followed by Enter in the **Manual** mode end in a '[M'.
 - o Add '@'s (for a 2 second delay) if you believe the called party needs more time to complete the data conversation.

A listing of the ASCII character codes for the **Ctrl** (control character) key operation is given in Appendix F.

4. Making a List of Your Directory Entries

If you have a printer attached, it is important to periodically make a list of your directory entries. If the AlphaMate has been without power for a short time, and the batteries not installed or are depleted, the memory contents may be lost or distorted. An updated directory listing will enable you to quickly re-enter the directory information. See Appendix C for sample printouts.

a. When the **Tel Dir** key is pushed the unit prompts **'TELEPHONE DIRECTORY'** and then **'Change, View, Print or Quit? C'**.

b. Press the **'P'** (for print) key, the unit will print the directory to the attached printer while displaying **'Press Quit to stop'**. After printing all telephone directory entries, the unit will return to the state displaying the message **'Change, View, Print or Quit? C'**.

5. Viewing a Directory Entry

The **View** mode is the most 'forgiving' way to look at the telephone directory because it does not require the user to remember the entire or exact name. (if the name is unknown see e.).

a. When the prompt **'Change, View, Print or Quit? C'** appears on the display, press the **'V'** (for view) key and the AlphaMate prompts **'Enter Name-'**.

b. Enter a name of up to seven characters beginning with an alpha. If a name beginning with a numeric is entered, AlphaMate prompts **'First character must be alpha-'**. The name is checked for a match against the directory. If there is no match, AlphaMate prompts **'Name not found '** and then **'Enter Name '**.

c. If a match is found, AlphaMate prompts the corresponding telephone number. The character at the end of the number shows the call-type.

d. AlphaMate then prompts **'Next, Again or Quit? N'**. Press **'A'** to view the entry again, **'N'** or **Enter** to view the next entry or **'Q'** to quit.

e. If an empty **Name** field is entered, the entire directory is presented to the display one by one. The **Name** field is displayed first, followed by the **Number** field. Press **Enter** to bring up the **Number** field and the message **'Next, Again or Quit? N'**. Then press **Enter** to display next directory and so on until the last entry. By pressing the ▼, down arrow key, the information displayed can be scrolled faster for each directory entry. If only the first letter(s) of the name is entered, the directory will begin with all names having that as the first letter(s). When completed AlphaMate will return to the message **'Next, Again or Quit? N'**.

6. Deleting an Entry

a. When the prompt **'Change, View, Print or Quit? C'** appears on the display, press the **'C'** (for change) key or **Enter** key and AlphaMate prompts **'Add, Edit, Delete or Quit? A'**.

b. Press the **'D'** (for delete) key and AlphaMate prompts **'Enter Name'**.

c. Enter a name of up to seven characters beginning with an alpha. If a name beginning with a numeric is entered, AlphaMate prompts **'First character must be alpha-'**. The name is checked for a match against the directory. If there is no match, AlphaMate prompts **'Name not found '** and then **'Enter Name '**.

d. If a match is found, AlphaMate prompts **'Delete this entry (N/Y)? N'**. A **'Y'** (for yes) key deletes the entry and a **'N'** (for no) key or **Enter** key returns you to the **'Change, View, Print or Quit? C'** prompt.

7. Editing an Entry

a. When the prompt **'Change, View, Print or Quit? C'** appears on the display, press the **'C'** (for change) key and AlphaMate prompts **'Add, Edit, Delete or Quit? A'**.

b. Press the **'E'** (for edit) key and AlphaMate prompts **'Enter Name'**.

c. Enter a name of up to seven characters beginning with an alpha. If a name beginning with a numeric is entered, AlphaMate prompts **'First character must be alpha-'**. The name is checked for a match against the directory. If there is no match, AlphaMate prompts **'Name not found '** and then **'Enter Name-'**.

d. If a match is found, AlphaMate prompts with the telephone number. Type in the correct phone number (refer to Section VI, paragraph 2.e) or press **Enter** to skip editing phone number.

e. Refer to Sections VI, paragraph 2 and 3 to edit the call-type and the Log-on message.

VII. USING COMM (communication)

1. General

The primary function of **Comm** (communication) is to establish either voice-call or non-automatic data communications with a remote paging system or dialup computer using the telephone network. The remote device must have an auto-answer Modem with data format and speed being compatible with the AlphaMate. A traditional telephone set must be connected to the AlphaMate if voice communications are desired.

A call can be made using the AlphaMate's telephone directory files or by dialing the number directly. The AlphaMate telephone directory saves time when placing a call; you just select the correct directory entry corresponding to the number and the AlphaMate dials automatically. It keeps your hands free by enabling you to dial with the handset on-hook.

The **Last Number Redial** feature allows you to automatically call the last number dialed by the AlphaMate.

2. Making a Phone Call using the Telephone Directory

- a. Operate the **Comm** key and the AlphaMate prompts '**Enter name or phone #**'.
- b. Enter a name of up to seven characters beginning with an alpha. If a name is entered, the name is checked for a match against the directory. If there is no match, AlphaMate prompts '**Name not found-**' and then '**Enter name or phone #**'.
- c. If a match is found, the telephone number will be displayed. The cursor will return to the first position of the number sequence and dialing will begin. In dialing the number, AlphaMate will shift the cursor to underscore each digit as it is being dialed.
- d. When dialing has been completed, the display is cleared and the AlphaMate displays '**Redial, Quit? R**'.

Pressing '**R**' (for redial) key or **Enter** key will restart the dialing sequence if a busy signal is obtained. AlphaMate will automatically go back to the '**Select Operation**' prompt if the connection is not made.

- e. Through the built-in loudspeaker, you will hear the Dialing tone, ringing tone, etc. of the call establishing process. The Volume Control does not change the audio level of the calling sequence telephone responses. If the call is successful, you will hear your party.

f. If the call is a voice call, pick up the handset of the attached telephone. You can then have a normal voice conversation using the handset. You can perform other operations, for example, editing a file while you are in a conversation with the called party. The AlphaMate will return to its '**Select Operation**' prompt if it is left idle for more 30 seconds.

g. If the called party is a host computer or paging system equipped with an auto-answering Modem, the high pitch carrier tone will be heard as soon as the called party answers the call. If the "conversation" with the host computer or paging system will be handled manually, the appropriate keyboard entries must be made to continue with the desired service or paging event. If the to be called party is listed in the **Telephone Directory** with the appropriate autologon message, and the name or initials are entered as a reply to the '**Enter name or phone #**' prompt, the display will note '**Logging...**' for the length of time required to establish a valid connection. When the sequence is successful, the display will show all replies received during the on-line connection. AlphaMate will terminate the call only when you exit from this mode by pressing **Quit** or other function keys. AlphaMate also terminates the call if absence of the Modem carrier tones is detected.

3. Making a Phone Call Manually

a. Operate the **Comm** key and AlphaMate prompts '**Enter name or phone #**'.

b. Enter the phone number digits. In addition to the numbers '0' to '9', AlphaMate also accepts the special characters '@' and '+' (refer to Section VI, paragraph 2). Your number entries will be displayed as you make them.

c. When the number is entered, check for correctness before pressing **Enter** to execute dialing.

d. AlphaMate prompts '**Telephone or Data? D**' (call-type). If the call is normal voice call, enter '**T**' (for telephone) key, otherwise enter '**D**' (for data) key.

e. When dialing the number, AlphaMate will shift the cursor to underscore each digit as it is being dialed. When dialing has been completed, the display is cleared and the AlphaMate prompts '**Redial, Quit? R**'.

Pressing '**R**' (for redial) or the **Enter** key will restart the dialing sequence.

f. Through the built-in speaker, you will hear the dialing tone, ringing tone, etc. of the call establishing process. If the call is successful, you will hear your party.

g. If the call is a voice call, pick up the handset of the attached telephone. You can then have a normal voice conversation using the handset. The AlphaMate will automatically disconnect from the phone line after 30 seconds. By entering a 'Quit' or 'Q' (for quit) AlphaMate will return to the 'Select Operation' prompt. You can perform other operations, for example, editing a file while you are in conversation with the called party.

h. If the called party is a host computer or paging terminal equipped with an auto-answering Modem, the high pitch carrier tone will be heard as soon as the called party answers the call and the display will be cleared once the communication link has been set up, i.e. you are on-line. AlphaMate will terminate the call only when you exit from this mode by pressing Quit or other function keys. AlphaMate also terminates the call if the absence of the Modem carrier tones is detected.

4. Using the Last Number Redial Feature

AlphaMate keeps the Last Number dialed in memory. Whenever the Comm function is invoked, AlphaMate prompts the last number dialed. Press the Enter key and answer the call-type prompt to start dialing. It is necessary to enter the name from the Telephone Directory again to have the autologon message sequence occur.

5. How to abort Dialing

You can abort dialing before it is completed by pressing the Quit key. As a result AlphaMate prompts 'Redial, Quit? R'. Press Quit once more to exit from the Comm mode.

6. Using the R-file Feature

During on-line operation, your inputs at the keyboard and outputs from the host computer are automatically stored in the R-file (see Section VIII). The size of the R-file is fixed at 2,000 characters. When the memory capacity is used up, the R-file will operate on a first-in-first-out basis: earlier data is erased, only the most recent data is retained.

7. Sending the T-file Through the Modem

During communication with the host, operating the Files key will cause AlphaMate to clear the display and prompt 'Send T-File (N/Y) N'. Upon pressing the 'Y' (for yes) key, and pressing Enter, the entire T-file will be sent through the telephone line. You can therefore prepare a T-file in advance (see Section VIII) and send it to a host computer or paging system for further processing.

VIII. USING THE FILE UTILITY

1. Introduction - What is a Text Editor

The text editing function of AlphaMate allows you to write and review messages that can be printed on paper. The **Text Editor** puts the AlphaMate into modes that allow you to insert and delete text, move the cursor through the text without changing it, and enter text in both upper and lower case. The text editor also contains control commands that ease the process of creating, revising and printing a message.

There are two file types, T-files and R-files. A T-file contains a message that you want to send out to a called party. An R-file contains paragraphs of text that have been received during the **Comm** mode or the **RS232** mode. Each file has a 2,000 byte memory capacity. The R-file will only retain what is being received during the current calling mode.

2. Using the Text Editing Function

Before editing a file, you must be familiar with the keyboard, the display, some commands, terminology and controlling operations.

a. The Keyboard

The symbol ' ^ ' stands for the **Ctrl** (Control) key, which is located on the right-hand side of the keyboard. The **Ctrl** key is always used in conjunction with another key. Like a **Shift** key, the **Ctrl** key must be held down while the other key is pressed. Unlike the **Shift** key, the code sent by the **Ctrl** key does not register on the display screen. It commands the **Text Editor** to perform editing functions. You must use the **Ctrl** key often when working with the **Text Editor**.

The arrows at the lower row of the keyboard control the direction that the cursor will move. The cursor is the line on the display that indicates where your next keystroke will appear.

NOTE: The occasional user will probably find use of the **Backspace** and the **Cursor Control** keys ( ,  ,  , ) to be sufficient for their needs. The following sections provide information on additional editing tools.

b. The Display

Think of the material you have entered as being on one long sheet of

paper - a scroll. Regard the display as an opening or window through which you can see only a small section of that long sheet of paper. You can move the window up and down, from left to right to see the material you have written.

Due to the size of the display, text is broken into groups of 40 characters. The display can show only one group at a time. If within

the 40 characters there is a line-terminating code such as a CARRIAGE RETURN or LINE FEED, the group will be terminated at that point. This group then becomes the last line. A new group will begin there and terminate after another 40 characters or until the next forced line-termination.

c. Cursor Control - Vertical Scrolling

The two cursor keys $\uparrow$ and $\downarrow$ may be used to access other groups of characters for review. Pressing the $\uparrow$ once causes AlphaMate to display the group immediately proceeding the line currently displayed. Repeated operation of the $\uparrow$ key recalls progressively earlier groups. This is known as backward scrolling. You can use this process to review the file contents group by group until the top of the file is reached.

The $\downarrow$ key operates with the reverse logic, displaying the group immediately following the currently displayed group. This is known as forward scrolling. At the two ends (top and bottom) of the file, further depression of the two cursor keys will have no effect and will generate the warning 'beep' tone.

d. Cursor Control - Horizontal Scrolling

For lines more than 40 characters, only the first (left-most) 40 characters are displayed immediately. To view the rest of the line, horizontal scrolling must be used. At the beginning, the cursor will be underscoring the left-most character. By repeatedly using the $\rightarrow$ key, the cursor can be moved to the right edge of the display. Operating the $\rightarrow$ key once more causes the group immediately following the currently displayed group to be displayed. Repeated depressions of the $\rightarrow$ key eventually brings the rest of the line into display.

The $\leftarrow$ key operates with reverse logic to the $\rightarrow$ key in moving the cursor. When the cursor is at the left edge of the display, pressing the $\leftarrow$ key once causes the AlphaMate to display the group immediately proceeding the line currently displayed.

e. Additional Cursor Control Commands

The following additional cursor control commands are provided:

^F - Move the cursor to the right by one word.

^A - Move the cursor to the left by one word.

^R - Display the first group of characters of a file.

^C - Display the last group of characters of a file.

^Z - Display the contents of a file line by line starting from the currently displayed group.

f. Text Entry - Insert Mode

The **^V** command controls whether **Insert** mode is **ON** or **OFF**. If **Insert** is **ON**, press **^V** and it will be turned **OFF**. Press **^V** again and **Insert** will be turned **ON** (the AlphaMate is in the **Insert ON** mode when it is first turned **ON**). It is recommended that AlphaMate be left in the **Insert ON** mode.

When **Insert** is **ON**, any character you have typed in will be entered to the left of the cursor, and all text following the inserted character will be moved to the right. You can insert characters, tab spaces, and entire lines. To insert a blank line, place the cursor at left margin of the line which should follow the blank line, then press **Enter**.

When **Insert** is **OFF**, character entries will be displayed on the space currently underscored by the cursor. If there is a character already in this space, that character will be replaced by the new entry. This serves as a simple technique for correcting typing errors. Use the cursor control keys to position the cursor to the mistyped characters and simply type in the correct characters.

No text can be entered when AlphaMate prompts '**Memory Full**'.

g. Deletion

If you make a mistake when you are typing text, you may delete unwanted characters to the left of the cursor by pressing the **Back Space** key. You may also press **^G** to delete a character at the current cursor position. All the text that follows the cursor will move to the left.

To delete an entire word, position the cursor to the beginning of a word and press ^T.

3. Operation of the Files Key.

As previously mentioned, there are two file types. When you operate the Files key, AlphaMate displays '**FILES**' and then '**Select File (R/T)? R**'. The '**R**' represents the R-file and the '**T**' represents the T-file. The files may be selected by pressing the corresponding letter key. The **Enter** key selects the R-file. AlphaMate displays the file type selected and asks you to select one of the following functions:

Edit - Allows you to prepare a new file or edit an old file already existing in memory. AlphaMate will display the contents of the file starting at the beginning of the file. You can begin text entry by keying in the characters one by one. Inserting text into existing text is also possible.

Copy - This function transfers an R-file to a T-file and then deletes the R-file afterward. Since only a T-file can be sent in **RS232** and **Comm** operations, it is necessary to copy the R-file to the T-file when you want to re-transmit your received messages to other parties.

Print - The selected file contents will be printed on the optional printer. The AlphaMate will display '**Press Quit to stop**', while printing is in progress.

Delete - The selected file contents will be deleted from memory. This is necessary occasionally to make room for new files.

IX. USING RS232

1. General

AlphaMate has an **RS232** port which can be connected to a host computer or local paging system. Before you make the connection, however, you must have suitable cable to link the unit to the target equipment and need to consider the following issues:

- o Baud Rate: 300, 1200 Baud.
- o Data Word Format: one of eight formats.
- o Carriage Return: with or without line feed.
- o Duplex: Half or Full Duplex.

These parameters are defined in the Set Up. (Section II paragraph 6.b)
They cannot be changed during communication.

2. Making a Cable for the RS232 Port

The **RS232** Serial Communication Standard was originally established to define the connection between a host computer and a remote terminal which is linked through the telephone network by means of Modem devices. At the terminal site, a Modem device (Data Communication Equipment - or DCE) connected to the terminal (Data Terminal Equipment or DTE) via a defined cabling scheme.

AlphaMate is intended to connect to either a host computer, a paging system or a microcomputer running a terminal emulation program. The **RS232** port for these devices may be configured as either DTEs or DCEs. Before you attempt to make a connection, you should review the information below. In addition, the corresponding information for the paging system or computer to which the AlphaMate is to be connected must be known.

You can obtain a cable for the target equipment from your dealer or you can make it yourself.

3. Connecting AlphaMate to Equipment Configured as DTE

This is the simplest connection scheme as shown in the following diagram.

<u>AlphaMate</u>	<u>DTE</u>
Pin 2 Rec Data (In)	Pin 2
Pin 3 Trans Data (Out)	Pin 3
Pin 4 Request to Send	Pin 4
Pin 5 Clear to Send	Pin 5
Pin 7 Ground	Pin 7

On the unit, pins 6, 8 and 20 are connected together internally, therefore supporting DTE devices that request a full set of handshaking lines.

4. Connecting AlphaMate to Equipment Configured as DCE.

This is somewhat more complicated. As you are now connecting two DCEs together, you will have to reverse a number of pin pairs as shown in the following diagram. A cable with these pin pairs is called a "Null-Modem" cable.

<u>AlphaMate</u>	<u>DCE</u>
Pin 2 -----	Pin 3
Pin 3 -----	Pin 2
Pin 4 -----	Pin 5
Pin 5 -----	Pin 4
Pin 7 -----	Pin 7

As before, pins 6, 8 and 20 are connected together internally, therefore supporting DCE devices that request a full set of handshaking lines.

5. Operating with a Host Computer or a Paging System.

When the RS232 key is depressed, the RS232 port at the rear becomes active. AlphaMate prompts 'RS232' momentarily and then clears the display, signaling that the unit has successfully completed a Handshake with the host. You are now on-line.

6. Using the R-file Feature.

During on-line operation, your inputs at the keyboard and outputs from the host computer are automatically stored into the R-file (see Section VII paragraph 6). The size of the R-file is fixed. When the memory capacity is used up, the R-file will operate on a first-in-first-out basis; earlier data is erased, only the most recent data is retained. The R-file memory will hold 2,000 characters.

7. Sending the T-file Through the RS232 Port.

During communication with the host, operating the **Files** key will cause AlphaMate to clear the display and prompt '**Send T-File (N/Y)** **N**'. Upon pressing the '**Y**' (for yes) key, the entire T-file will be sent through the **RS232** port. You can therefore prepare a T-file in advance (see Section VIII paragraph 3) and send it to a host for further processing. The T-file memory is also 2,000 characters.

GLOSSARY

ASCII	(American National Standard Code for Information Interchange) Standard format for coding letters, numbers, grammatical symbols and machine functions.
Autologon	Programmed link-up to another computer.
Baud rate	The speed at which a computer communicates with another device. Baud is a technical term for 'bits per second'. If you are transmitting a 10 bit data word at 300 baud, you are sending 30 characters per second.
Control characters	Letters that when pressed with the Ctrl key bring about functions (e.g. ^V = enables insertion during Text Editor).
Cursor	A movable place marker.
Data-word format	The combination of start bit, data bits, parity bit and stop bits is call the data word format. One data word is used to represent each character of transmitted data.
Echo	A reflected display of your input.
Full duplex	In full duplex communication, characters sent from point a to point b are echoed backed from point b before they appear on point a's terminal.
Half duplex	In half duplex communication, characters sent from point a to point b are sent directly to point a's terminal, as well as to point b. Point b does not echo the characters back to point a.
Interface	The point where two machines link up, at the simplest level, this can be just a plug and socket.
Log-on	To activate a computer program by inputting a prescribed sequence of commands which typically include giving the name of the program and identifying yourself.

Modem	Short for MOD ulator- DE Modulator, a device to convert a computer signal into a form that can be transmitted through the normal telephone network.
On-line	A completed communications link has been achieved between AlphaMate and the host computer. Data transfer can now occur between both parties.
Parameter	Rules for machine operation.
Parity	A technique for forming messages to detect errors that may have occurred during transmission.
Password	A usual way to verify the identity of a computer user.
RS232	An EIA (Electron Industries Association) data transmission standard that employs the serial binary system.
Start bit	A start bit is used to signify the beginning of a data word.
Stop bit	A stop bit is used to signify the end of a data word.

Appendix A

Sample Printout of Page Directory

PAGE DIR.

BOB S = 7372456/9@4759732

BILL I = 7372384/5250

GORDON = 7375729/5250

ALLAN = 7376230/5250

DH = 7372050/5250

Appendix B

Sample Printout of Autologon Sequence Message: Dow Jones News/Retrieval Service

R = Received Message
T = Transmitted Message
[M= Carriage Return

TEL. DIR.

File name entered is 'DOW'
with the phone # to access;
Noted as an Autologon Call.

DOW = 9@5891260/A

Received Message is 'please type
your terminal identifier'.

Rier

Transmit A

TA

Received message is 'please log in:'

Rlog in:

Transmit user name: DOW1;;
TC host is online

TDOW1;;

Received message is 'WHAT SERVICE PLEASE????'

RLEASE??

Transmit DJNS[M

TDJNS[M

Received message is 'ENTER PASSWORD'

RSWORD

Transmit assigned password.

T22WD22NSCH[M

As loaded into memory in the Telephone
Directory the printout would look like this:

DOW = 9@5891260/A

Rier
TA
Rlog in:
TDOW1;;
RLEASE??
TDJNS[M
RSWORD
T22WD22NCH[M

Other information services are available and their autologon stops
can be similarly created and placed in the Telephone Directory
memory for future use.

Appendix C

Sample Printout of Telephone Directory

TEL. DIR.

SUSAN = 9@3057372669/T

Telephone # to be autodialed

GEORGE = 9@3125671122/T

ANN = 5671/T

Telephone # (extension) to be autodialed

STEVE = 6662/T

PAGESYS = 9@7275238/D

Telephone # for access to outside data link

FTLPAGE = 4657/P

File name to be referenced for the paging system phone # in the Paging Directory when in that cities office area to access Ken.

ORDPAGE = 6313387/P

Dir. references for paging system phone # access for Robert.

Expanded Page Directory showing cross reference to Telephone Directory entries

PAGE DIR.

BOB S = 7372456/9@4759732

BILL I = 7372438/5250

GORDON = 7375729/5250

ALLAN = 7376230/5250

DH = 7372050/5250

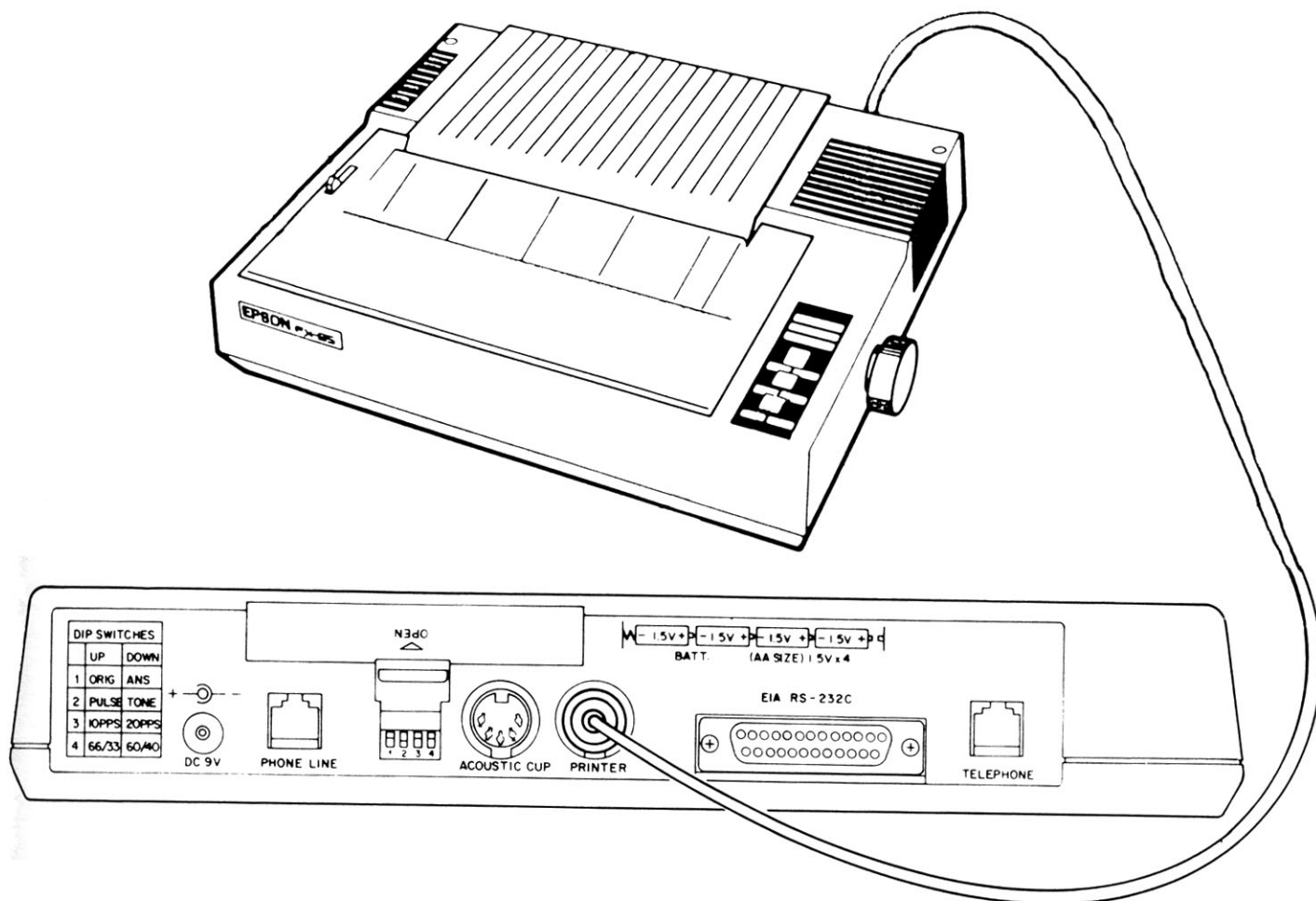
KEN = 8242204/FTLPAGE

ROBERT = 6732026/ORDPAGE

[illegible]

Appendix D

Optional Printer Connection to AlphaMate



Rear Panel of the AlphaMate

Pin Connections for Printer Socket

<u>Pin No.</u>	<u>Function</u>
1	-
2	Data Output
3	Ground
4	-
5	Printer Ready

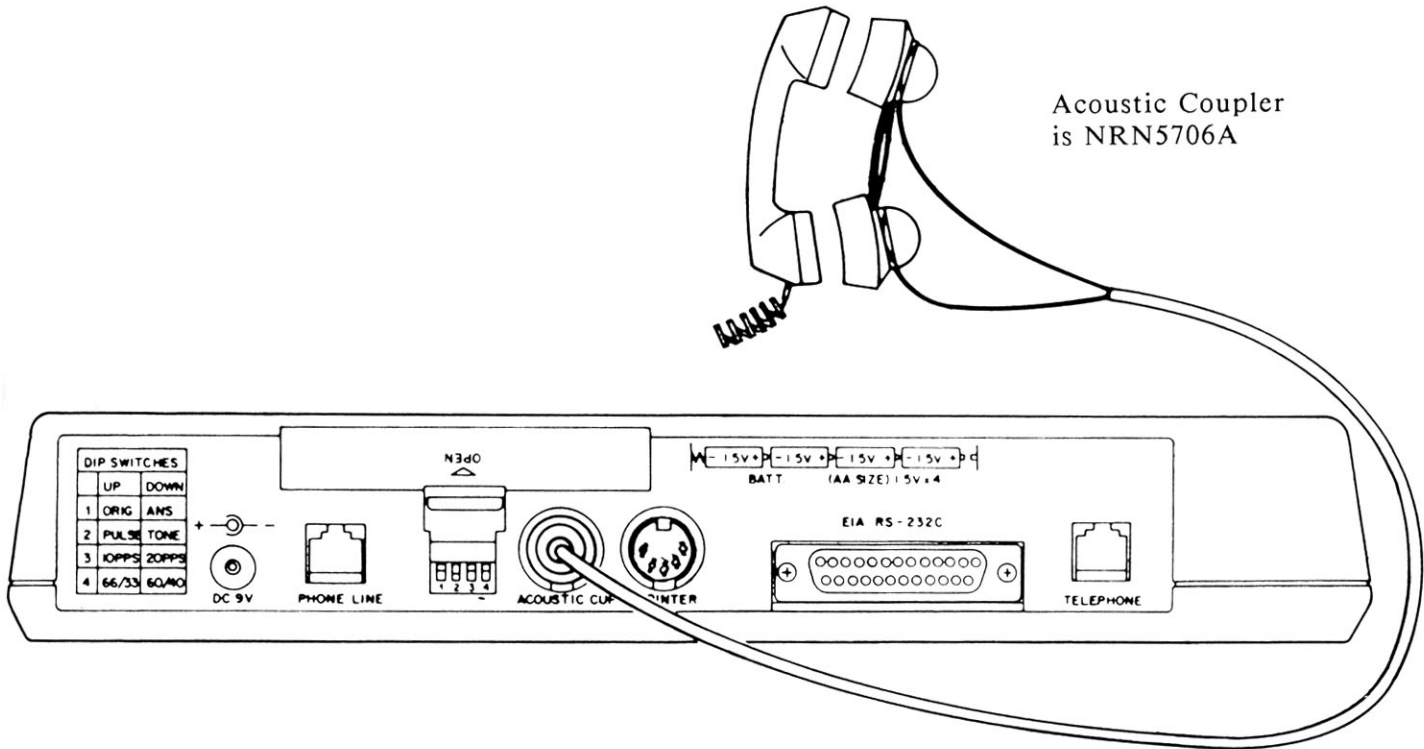
Appendix D (continued)

Serial Printer set to:
Speed - 1200 Baud Rate
Data Format: 8 data bits
No (mark) parity
1 stop bit

Printer Cable NKN8023A is an available accessory for EPSON Printers (with optional serial interface) LX86, RX80, FX80. In the Set Up mode AlphaMate must select Enter is CR + LF; 2.

Appendix E

Acoustic Coupler Connection to AlphaMate



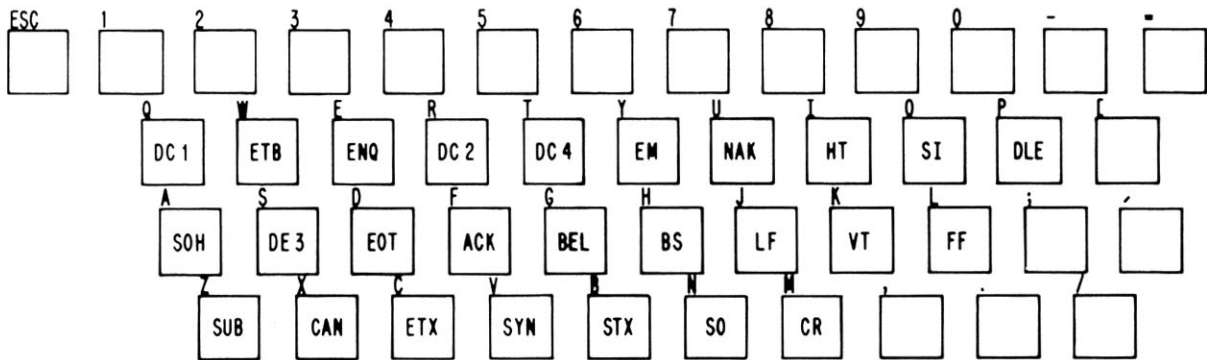
Rear Panel of the AlphaMate

Pin Connections for Acoustic Cup Socket

<u>Pin No.</u>	<u>Function</u>
1	Data Output
2	Ground
3	Ground
4	Acoustic Sampler Sense Line (external plug to connect pin 4 to pin 2.
5	Received Data

Appendix F

AlphaMate Keyboard



ASCII Character Codes for Ctrl (Control Character) Key Operation

RADIO COMMUNICATIONS INTERFERENCE

WARNING: The AlphaMate unit can radiate radio frequency energy and if not installed and used in accordance with the Instruction Manual may cause interference to Radio and TV communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area may cause interference in which case the user, at his own expense, will be required to take whatever measures may be required to correct the interference.

According to FCC Part 68 registration for "AlphaMate" system connected to the Public Telephone Network, you must supply the Telephone Company with the following information:

FCC Registration No. E96907-72754-DT-E

Ringer Equivalence 0.3B